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<110> Gorczynski, Reginald M.

Clark, David A.

<120> Methods and Compositions for Modulating Tumor Growth

<130> 9579-39

<140> US 09/917,278

<141> 2001-07-30

<150> US 60/064,764

<151> 1997-11-07

<150> US 60/222,725

<151> 2000-08-03

<160> 22

<170> PatentIn version 3.1

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35 40 45

Leu Arg Cys Ser Leu Lys Thr Ser Gln Glu Pro Leu Ile Val Thr Trp
50 55 60

Gln Lys Lys Lys Ala Val Ser Pro Glu Asn Met Val Thr Tyr Ser Lys
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Thr His Gly Val Val Ile Gln Pro Ala Tyr Lys Asp Arg Ile Asn Val
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Thr Glu Leu Gly Leu Trp Asn Ser Ser Ile Thr Phe Trp Asn Thr Thr
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Leu Glu Asp Glu Gly Cys Tyr Met Cys Leu Phe Asn Thr Phe Gly Ser
115 120 125

Gln Lys Val Ser Gly Thr Ala Cys Leu Thr Leu Tyr Val Gln Pro Ile
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Val His Leu His Tyr Asn Tyr Phe Glu Asp His Leu Asn Ile Thr Cys
145 150 155 160

Ser Ala Thr Ala Arg Pro Ala Pro Ala Ile Ser Trp Lys Gly Thr Gly
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Thr Gly Ile Glu Asn Ser Thr Glu Ser His Phe His Ser Asn Gly Thr
180 185 190

Thr Ser Val Thr Ser Ile Leu Arg Val Lys Asp Pro Lys Thr Gln Val
195 200 205

Gly Lys Glu Val Ile Cys Gln Val Leu Tyr Leu Gly Asn Val Ile Asp
210 215 220

Tyr Lys Gln Ser Leu Asp Lys Gly Phe Trp Phe Ser Val Pro Leu Leu
225 230 235 240

Leu Ser Ile Val Ser Leu Val Ile Leu Leu Val Leu Ile Ser Ile Leu
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Leu Tyr Trp Lys Arg His Arg Asn Gln Glu Arg Gly Glu Ser Ser Gln

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Gly Met Gln Arg Met Lys
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<223> GADPH Sense

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<212> DNA

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<211> 825

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<212> PRT

<213> Homo sapiens

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20 25 30

Gln Asp Glu Arg Glu Gln Leu Tyr Thr Thr Ala Ser Leu Lys Cys Ser
35 40 45

Leu Gln Asn Ala Gln Glu Ala Leu Ile Val Thr Trp Gln Lys Lys Lys
50 55 60

Ala Val Ser Pro Glu Asn Met Val Thr Phe Ser Glu Asn His Gly Val
65 70 75 80

Val Ile Gln Pro Ala Tyr Lys Asp Lys Ile Asn Ile Thr Gln Leu Gly
85 90 95

Leu Gln Asn Ser Thr Ile Thr Phe Trp Asn Ile Thr Leu Glu Asp Glu
100 105 110

Gly Cys Tyr Met Cys Leu Phe Asn Thr Phe Gly Phe Gly Lys Ile Ser
115 120 125

Gly Thr Ala Cys Leu Thr Val Tyr Val Gln Pro Ile Val Ser Leu His
130 135 140

Tyr Lys Phe Ser Glu Asp His Leu Asn Ile Thr Cys Ser Ala Thr Ala
145 150 155 160

Arg Pro Ala Pro Met Val Phe Trp Lys Val Pro Arg Ser Gly Ile Glu
165 170 175

Asn Ser Thr Val Thr Leu Ser His Pro Asn Gly Thr Thr Ser Val Thr
180 185 190

Ser Ile Leu His Ile Lys Asp Pro Lys Asn Gln Val Gly Lys Glu Val
195 200 205

Ile Cys Gln Val Leu His Leu Gly Thr Val Thr Asp Phe Lys Gln Thr
210 215 220

Val Asn Lys Gly Tyr Trp Phe Ser Val Pro Leu Leu Leu Ser Ile Val
225 230 235 240

Ser Leu Val Ile Leu Leu Val Leu Ile Ser Ile Leu Leu Tyr Trp Lys
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Arg His Arg Asn Gln Asp Arg Gly Glu Leu Ser Gln Gly Val Gln Lys
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<210> 20

<211> 837

<212> DNA

<213> Rattus norvegicus

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<213> Rattus norvegicus

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20 25 30

Glu Val Val Thr Gln Asp Glu Arg Lys Leu Leu His Thr Thr Ala Ser
35 40 45

Leu Arg Cys Ser Leu Lys Thr Thr Gln Glu Pro Leu Ile Val Thr Trp
50 55 60

Gln Lys Lys Lys Ala Val Gly Pro Glu Asn Met Val Thr Tyr Ser Lys
65 70 75 80

Ala His Gly Val Val Ile Gln Pro Thr Tyr Lys Asp Arg Ile Asn Ile
85 90 95

Thr Glu Leu Gly Leu Leu Asn Thr Ser Ile Thr Phe Trp Asn Thr Thr
100 105 110

Leu Asp Asp Gly Gly Cys Tyr Met Cys Leu Phe Asn Met Phe Gly Ser
115 120 125

Gly Lys Val Ser Gly Thr Ala Cys Leu Thr Leu Tyr Val Gln Pro Ile
130 135 140

Val His Leu His Tyr Asn Tyr Phe Glu His His Leu Asn Ile Thr Cys
145 150 155 160

Ser Ala Thr Ala Arg Pro Ala Pro Ala Ile Ser Trp Lys Gly Thr Gly
165 170 175

Ser Gly Ile Glu Asn Ser Thr Glu Ser His Ser His Ser Asn Gly Thr
180 185 190

Thr Ser Val Thr Ser Ile Leu Arg Val Lys Asp Pro Lys Thr Gln Val
195 200 205

Gly Lys Glu Val Ile Cys Gln Val Leu Tyr Leu Gly Asn Val Ile Asp
210 215 220

Tyr Lys Gln Ser Leu Asp Lys Gly Phe Trp Phe Ser Val Pro Leu Leu
225 230 235 240

Leu Ser Ile Val Ser Leu Val Ile Leu Leu Val Leu Ile Ser Ile Leu
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Leu Tyr Trp Lys Arg His Arg Asn Gln Glu Arg Gly Glu Ser Ser Gln
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Gly Met Gln Arg Met Lys
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